SEQUENCE LISTING

<110> IPF PharmaCeuticals GmbH

<120> Peptides and their use for the treatment of HIV infections

<130> 032873wo ME/BM

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<150> 02028465.9
<151> 2002-12-19

<160> 88

<170> PatentIn Ver. 2.1

<210> 1
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<213> Homo sapiens

<400> 1
Leu Glu Ala Ile Pro Met Ser Ile Pro Pro Glu Val Lys Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
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<210> 2
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<220>
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<222> (10)
<223> Xaa is D-proline

<400> 2
Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Val Ala Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
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<210> 3
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<220>
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<220>
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<223> Xaa is D-proline

<400> 3
Leu Glu Ala Ile Pro Cys Ser Ile Pro Xaa Cys Val Ala Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
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<210> 4
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<220>
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<400> 4
Leu Glu Ala Ile Pro Cys Ser Ile Pro Pro Cys Val Gly Phe Gly Lys
1 5 10 15

Pro Phe Val Phe
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<210> 5
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<220>
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<400> 5
Leu Glu Ala Ile Pro Cys Ser Ile Pro Pro Cys Val Leu Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
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<210> 6
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<220>
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<400> 6

Leu Glu Ala Ile Pro Cys Ser Ile Pro Pro Cys Val Phe Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
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<210> 7
<211> 20
<212> PRT
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<220>
<223> Description of Artificial Sequence: VIR-165

<400> 7
Leu Glu Ala Ile Pro Cys Ser Ile Pro Pro Cys Phe Ala Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
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<210> 8
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<220>
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<223> Xaa is D-Tic

<220>
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<222> (18)
<223> Xaa is D-Tic

<400> 8
Leu Glu Ala Ile Pro Cys Ser Ile Pro Pro Cys Val Ala Xaa Asn Lys
1 5 10 15

Pro Xaa Phe Val Phe
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<210> 9
<211> 20
<212> PRT
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<220>
<223> Description of Artificial Sequence: VIR-170

<400> 9

Leu Glu Ala Ile Pro Met Ser Ile Pro Pro Glu Val Phe Phe Gly Lys
1 5 10 15

Pro Phe Val Phe
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<210> 10
<211> 20
<212> PRT
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<220>
<223> Description of Artificial Sequence: VIR-175

<400> 10
Leu Glu Ala Ile Pro Met Ser Ile Pro Pro Glu Phe Leu Phe Gly Lys
1 5 10 15

Pro Phe Val Phe
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<210> 11
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<220>
<223> Description of Artificial Sequence: VIR-182

<400> 11
Leu Glu Ala Ile Pro Met Ser Ile Pro Pro Glu Leu Ala Phe Ala Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 12
<211> 20
<212> PRT
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<220>
<223> Description of Artificial Sequence: VIR-184

<400> 12
Leu Glu Ala Ile Pro Met Ser Ile Pro Pro Glu Ile Ala Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
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<210> 13
<211> 20
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<220>
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<400> 13
Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Val Gly Phe Gly Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 14
<211> 20
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<220>
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<220>
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<400> 14
Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Val Leu Phe Gly Lys
1 5 10 15

Pro Phe Val Phe
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<210> 15
<211> 20
<212> PRT
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<220>
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<220>
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<222> (10)
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<400> 15
Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Val Phe Phe Gly Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 16
<211> 20
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<220>
<223> Description of Artificial Sequence: VIR-193

<220>
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<222> (10)
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<400> 16
Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Phe Ala Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
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<210> 17
<211> 20
<212> PRT
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<220>
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<223> Xaa is a D-proline

<400> 17
Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Val Phe Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 18
<211> 20
<212> PRT
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<220>
<223> Description of Artificial Sequence: VIR-199

<220>
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<222> (10)
<223> Xaa is D-proline

<400> 18

Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Phe Leu Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 19
<211> 20
<212> PRT
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<220>
<223> Description of Artificial Sequence: VIR-229

<220>
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<223> Xaa is D-proline

<400> 19
Leu Glu Ala Ile Pro Ile Ser Ile Pro Xaa Glu Val Ala Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
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<210> 20
<211> 20
<212> PRT
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<220>
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<220>
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<222> (10)
<223> Xaa is D-proline

<400> 20
Leu Glu Ala Ile Pro Met Gly Ile Pro Xaa Glu Val Ala Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 21
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-243

<400> 21

Leu Glu Ala Ile Pro Met Ser Ile Pro Pro Glu Phe Ala Phe Asn Lys
1 5 10 15

Asp Phe Val Phe
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<210> 22
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-252

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 22
Leu Glu Asp Ile Pro Met Ser Ile Pro Xaa Glu Val Ala Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 23
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-255

<220>
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<222> (10)
<223> Xaa is D-proline

<400> 23
Leu Glu Lys Ile Pro Met Ser Ile Pro Xaa Glu Val Ala Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 24
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-257

<220>

<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (13)
<223> Xaa is cyclohexylalanine

<400> 24
Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Val Xaa Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 25
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-258

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (12)
<223> Xaa is 1-naphthylalanine

<400> 25
Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Xaa Ala Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 26
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-259

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<220>
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<222> (12)
<223> Xaa is p-fluorophenylalanine

<400> 26
Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Xaa Ala Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 27
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-260

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (13)
<223> Xaa is 4-pyridylalanine

<400> 27
Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Val Xaa Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 28
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-261

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (12)
<223> Xaa is 3,3-diphenylalanine

<400> 28
Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Xaa Ala Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 29
<211> 20
<212> PRT
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<220>
<223> Description of Artificial Sequence: VIR-262

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (13)
<223> Xaa is D-Tic

<400> 29
Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Val Xaa Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 30
<211> 20
<212> PRT
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<220>
<223> Description of Artificial Sequence: VIR-263

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (13)
<223> Xaa is L-Tic

<400> 30
Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Val Xaa Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 31

<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-264

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (13)
<223> Xaa is 3-benzothienylalanine

<400> 31
Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Val Xaa Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 32
<211> 20
<212> PRT
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<220>
<223> Description of Artificial Sequence: VIR-265

<220>
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<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (13)
<223> Xaa is 3-thienylalanine

<400> 32
Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Val Xaa Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 33
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-266

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa ia D-proline

<400> 33
Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Val Trp Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 34
<211> 20
<212> PRT
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<220>
<223> Description of Artificial Sequence: VIR-268

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (17)
<223> Xaa is L-Tic

<400> 34
Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Val Ala Phe Asn Lys
1 5 10 15

Xaa Phe Val Phe
20

<210> 35
<211> 20
<212> PRT
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<220>
<223> Description of Artificial Sequence: VIR-269

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<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (17)
<223> Xaa is Oic

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1 5 10 15

Xaa Phe Val Phe
20

<210> 36
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-272

<400> 36
Leu Glu Ala Ile Pro Met Cys Ile Pro Pro Glu Cys Leu Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 37
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-273

<400> 37
Leu Glu Ala Ile Pro Met Cys Ile Pro Pro Glu Cys Phe Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 38
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-274

<400> 38
Leu Glu Ala Ile Pro Met Cys Ile Pro Pro Glu Cys Leu Phe Gly Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 39
<211> 20

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-280

<400> 39
Leu Glu Ala Ile Pro Cys Ser Ile Pro Pro Cys Phe Leu Phe Gly Lys
1 5 10 15
Pro Phe Val Phe
20

<210> 40
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-284

<400> 40
Leu Glu Ala Ile Pro Ile Ser Ile Pro Pro Glu Val Phe Phe Gly Lys
1 5 10 15
Pro Phe Val Phe
20

<210> 41
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<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-286

<400> 41
Leu Glu Ala Ile Pro Ile Ser Ile Pro Pro Glu Leu Ala Phe Ala Lys
1 5 10 15
Pro Phe Val Phe
20

<210> 42
<211> 20
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<220>
<223> Description of Artificial Sequence: VIR-290

<220>
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<222> (10)
<223> Xaa is D-proline

<400> 42
Leu Glu Ala Ile Pro Ile Ser Ile Pro Xaa Glu Val Phe Phe Gly Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 43
<211> 20
<212> PRT
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<220>
<223> Description of Artificial Sequence: VIR-298

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 43
Leu Glu Ala Ile Pro Ile Ser Ile Pro Xaa Glu Val Trp Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 44
<211> 20
<212> PRT
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<220>
<223> Description of Artificial Sequence: VIR-320

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 44
Leu Glu Ala Ile Pro Met Gly Ile Pro Xaa Glu Val Phe Phe Gly Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 45
<211> 20
<212> PRT
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<220>
<223> Description of Artificial Sequence: VIR-322

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 45
Leu Glu Ala Ile Pro Met Gly Ile Pro Xaa Glu Val Phe Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 46
<211> 20
<212> PRT
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<220>
<223> Description of Artificial Sequence: VIR-323

<220>
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<222> (10)
<223> Xaa is D-proline

<400> 46
Leu Glu Ala Ile Pro Met Gly Ile Pro Xaa Glu Phe Leu Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 47
<211> 20
<212> PRT
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<220>
<223> Description of Artificial Sequence: VIR-326

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 47
Leu Glu Asp Ile Pro Met Gly Ile Pro Xaa Glu Val Ala Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 48
<211> 20

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-328

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 48
Leu Glu Ala Ile Pro Met Gly Ile Pro Xaa Glu Val Trp Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 49
<211> 20
<212> PRT
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<220>
<223> Description of Artificial Sequence: VIR-344

<400> 49
Leu Glu Ala Ile Pro Cys Ser Ile Pro Pro Cys Val Phe Phe Gly Lys
1 5 10 15

Pro Phe Val Phe
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<210> 50
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-345

<400> 50
Leu Glu Ala Ile Pro Cys Ser Ile Pro Pro Cys Phe Leu Phe Gly Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 51
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-346

<400> 51
Leu Glu Ala Ile Pro Cys Ser Ile Pro Pro Cys Leu Ala Phe Ala Lys
1 5 10 15
Pro Phe Val Phe
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<210> 52
<211> 20
<212> PRT
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<220>
<223> Description of Artificial Sequence: VIR-348

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 52
Leu Glu Ala Ile Pro Cys Ser Ile Pro Xaa Cys Val Gly Phe Gly Lys
1 5 10 15
Pro Phe Val Phe
20

<210> 53
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-350

<220>
<221> MUTAGEN
<222> (10)
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<400> 53
Leu Glu Ala Ile Pro Cys Ser Ile Pro Xaa Cys Val Phe Phe Gly Lys
1 5 10 15
Pro Phe Val Phe
20

<210> 54
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-351

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 54
Leu Glu Ala Ile Pro Cys Ser Ile Pro Xaa Cys Phe Ala Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 55
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-352

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 55
Leu Glu Ala Ile Pro Cys Ser Ile Pro Xaa Cys Val Phe Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 56
<211> 20
<212> PRT
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<220>
<223> Description of Artificial Sequence: VIR-353

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 56
Leu Glu Ala Ile Pro Cys Ser Ile Pro Xaa Cys Phe Leu Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 57
<211> 20

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-354

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 57
Leu Glu Ala Ile Pro Cys Ser Ile Pro Xaa Cys Val Ala Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 58
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-355

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 58
Leu Glu Ala Ile Pro Cys Gly Ile Pro Xaa Cys Val Ala Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 59
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-356

<400> 59
Leu Glu Ala Ile Pro Cys Ser Ile Pro Pro Cys Phe Ala Phe Asn Lys
1 5 10 15

Asp Phe Val Phe
20

<210> 60
<211> 20

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-357

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 60
Leu Glu Asp Ile Pro Cys Ser Ile Pro Xaa Cys Val Ala Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 61
<211> 20
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<220>
<223> Description of Artificial Sequence: VIR-358

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 61
Leu Glu Lys Ile Pro Cys Ser Ile Pro Xaa Cys Val Ala Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 62
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-376

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 62
Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Phe Leu Phe Gly Lys
1 5 10 15

Pro Ala Phe Val Phe

20

<210> 63
<211> 21
<212> PRT
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<220>
<223> Description of Artificial Sequence: VIR-377

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 63
Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Phe Leu Phe Gly Lys
1 5 10 15

Pro Gly Phe Val Phe
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<210> 64
<211> 21
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<223> Description of Artificial Sequence: VIR-380

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 64
Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Phe Leu Phe Gly Lys
1 5 10 15

Pro Phe Phe Val Phe
20

<210> 65
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<220>
<223> Description of Artificial Sequence: VIR-384

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 65
Leu Glu Ala Ile Pro Met Ser Ile Pro Xaa Glu Phe Leu Phe Gly Lys
1 5 10 15

Pro Glu Phe Val Phe
20

<210> 66
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-396

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 66
Leu Glu Ala Ile Pro Met Ser Ala Pro Xaa Glu Phe Leu Phe Gly Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 67
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-400

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 67
Leu Glu Ala Ile Pro Met Ser Phe Pro Xaa Glu Phe Leu Phe Gly Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 68
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-416

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 68
Leu Glu Ala Ile Pro Met Gly Ile Pro Xaa Glu Phe Leu Phe Gly Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 69
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-418

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 69
Leu Glu Lys Ile Pro Met Gly Ile Pro Xaa Glu Phe Leu Phe Gly Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 70
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-445

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (13)
<223> Xaa is D-Tic

<400> 70
Leu Glu Ala Ile Pro Ile Ser Ile Pro Xaa Pro Glu Val Xaa Phe Asn
1 5 10 15

Lys Pro Phe Val Phe
20

<210> 71
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-447

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (17)
<223> Xaa is L-Tic

<400> 71
Leu Glu Ala Ile Pro Ile Ser Ile Pro Xaa Glu Val Ala Phe Asn Lys
1 5 10 15

Xaa Phe Val Phe
20

<210> 72
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-448

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (13)
<223> Xaa is D-Tic

<400> 72
Leu Glu Ala Ile Pro Met Gly Ile Pro Xaa Glu Val Xaa Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 73
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-449

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (13)
<223> Xaa is L-Tic

<400> 73
Leu Glu Ala Ile Pro Met Gly Ile Pro Xaa Glu Val Xaa Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 74
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-452

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (13)
<223> Xaa is L-Tic

<400> 74
Leu Glu Asp Ile Pro Met Ser Ile Pro Xaa Glu Val Xaa Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 75
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-454

<220>
<221> MUTAGEN

<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (13)
<223> Xaa is D-Tic

<400> 75
Leu Glu Lys Ile Pro Met Ser Ile Pro Xaa Glu Val Xaa Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 76
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-455

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (13)
<223> Xaa is L-Tic

<400> 76
Leu Glu Lys Ile Pro Met Ser Ile Pro Xaa Glu Val Xaa Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 77
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-479

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<400> 77
Leu Glu Asp Ile Pro Ile Gly Ile Pro Xaa Glu Phe Leu Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 78
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-483

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (13)
<223> Xaa is D-Tic

<400> 78
Leu Glu Lys Ile Pro Ile Gly Ile Pro Xaa Glu Val Xaa Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 79
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-484

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (13)
<223> Xaa is L-Tic

<400> 79
Leu Glu Lys Ile Pro Ile Gly Ile Pro Xaa Glu Val Xaa Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 80

<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-485

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (17)
<223> Xaa is L-Tic

<400> 80
Leu Glu Lys Ile Pro Ile Gly Ile Pro Xaa Glu Val Ala Phe Asn Lys
1 5 10 15

Xaa Phe Val Phe
20

<210> 81
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-487

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (13)
<223> Xaa is L-Tic

<400> 81
Leu Glu Asp Ile Pro Ile Gly Ile Pro Xaa Glu Val Xaa Phe Asn Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 82
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-488

<220>
<221> MUTAGEN
<222> (10)
<223> Xaa is D-proline

<220>
<221> MUTAGEN
<222> (17)
<223> Xaa is L-Tic

<400> 82
Leu Glu Asp Ile Pro Ile Gly Ile Pro Xaa Glu Val Ala Phe Asn Lys
1 5 10 15

Xaa Phe Val Phe
20

<210> 83
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-512

<220>
<221> MUTAGEN
<222> (1)
<223> Xaa is N-methyl-leucine

<400> 83
Xaa Glu Ala Ile Pro Met Ser Ile Pro Pro Glu Phe Leu Phe Gly Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 84
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-568

<400> 84
Leu Glu Ala Ile Pro Met Ser Cys Pro Pro Glu Phe Cys Phe Gly Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 85
<211> 20

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-570

<400> 85
Leu Glu Ala Ile Pro Cys Ser Ile Pro Pro Glu Cys Leu Phe Gly Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 86
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-576

<220>
<221> DISULFID
<222> (6)
<223> An intermolecular disulfide bridge forms between the cysteine residues of two VIR-576, giving rise to a homo-dimer.

<400> 86
Leu Glu Ala Ile Pro Cys Ser Ile Pro Pro Glu Phe Leu Phe Gly Lys
1 5 10 15

Pro Phe Val Phe
20

<210> 87
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-580

<220>
<221> BINDING
<222> (20)
<223> Mini-PEG rest is bound to phenylalanine; Mini-PEG =
-NH-(CH2)2-O-(CH2)2-O-CH2-CO-NH-(CH2)2-O-(CH2)2-O-CH2-CO-NH2

<400> 87
Leu Glu Ala Ile Pro Met Ser Ile Pro Pro Glu Phe Leu Phe Gly Lys
1 5 10 15

Pro Phe Val Phe

20

<210> 88
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: VIR-590

<400> 88
Leu Glu Ala Ile Pro Met Lys Ile Pro Pro Glu Phe Leu Phe Gly Lys
1 5 10 15

Pro Phe Val Phe
20